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SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
367989	Tube SST PLH 13X100mm 5.0ml SLBL Gold	BD Vacutainer® SST™ Blood Collection Tubes
367986	Tube SST PLH 13X100mm 5.0ml PLBL Gold	BD Vacutainer® SST™ Blood Collection Tubes
368013	Tube SST PLH 13X100mm 5.0ml BRC GOLD	BD Vacutainer® SST™ Blood Collection Tubes

Recommended restrictions

Recommended use: Scientific and industrial laboratory use. For In Vitro Diagnostic Use.

Restrictions on use: For External Use Only

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: BD, Integrated Diagnostic Solutions
Address: 1 Becton Drive
Franklin Lakes, NJ 07417
USA

Telephone: 1 800 631 0174
Fax: 1 201 847 4866
Contact Person: Technical Services
E-mail: productcomplaints@bd.com

Emergency telephone number: CHEMTREC 1 800 424 9300



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2. Hazard(s) identification

Hazard Classification

Health Hazards

Carcinogenicity

Category 1A

Label Elements

Hazard Symbol:



Signal Word:

Danger

Hazard Statement:

H350: May cause cancer.

Precautionary Statements

Prevention:

P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P308+P313: IF exposed or concerned: Get medical advice/attention.

Storage:

P405: Store locked up.

Disposal:

P501: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards which do not result in GHS classification:

None.

3. Composition/information on ingredients



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Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
Silane, dichlorodimethyl-, reaction products with silica	No data available.	68611-44-9	4.1927%
Quartz (SiO ₂)	No data available.	14808-60-7	0.1388%
Titanium oxide (TiO ₂)	No data available.	13463-67-7	0.0171%
Aluminum oxide (Al ₂ O ₃)	No data available.	1344-28-1	0.0015%
Iron oxide (Fe ₂ O ₃)	No data available.	1309-37-1	0.0001%
Benzene, methyl-	No data available.	108-88-3	0.44PPM

^{*} All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Description of first aid measures

General information:	Get medical attention if symptoms occur. May cause cancer.
Inhalation:	Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.
Skin Contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur.
Eye contact:	Important! Immediately rinse with water for at least 15 minutes. Get medical attention if symptoms occur.
Ingestion:	Rinse mouth thoroughly. Seek medical advice.
Personal Protection for First-aid Responders:	No data available.
Most important symptoms and effects, both acute and delayed	
Symptoms:	No data available.
Hazards:	Low hazard for recommended handling by trained personnel.



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Indication of immediate medical attention and special treatment needed

Treatment: Get medical attention if symptoms occur.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, fog, CO₂, dry chemical, or alcohol resistant foam.

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture: None known.

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures: No unusual fire or explosion hazards noted.

Special protective equipment for fire-fighters: Use fire-extinguishing media appropriate for surrounding materials. Wear self-contained breathing apparatus and protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid contact with spilled material. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Accidental release measures: No data available.

Methods and material for containment and cleaning up: Sweep or scoop up and remove. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental Precautions: Do not release into the environment.



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7. Handling and storage

Handling

Technical measures:	No data available.
Local/Total ventilation:	No data available.
Safe handling advice:	Wear appropriate personal protective equipment. Low hazard for recommended handling by trained personnel.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Keep containers tightly closed. Keep the container in a safe place. Keep in a cool, well-ventilated place.
Safe packaging materials:	No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Silane, dichlorodimethyl-, reaction products with silica	AN ESL	0.27 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
	ST ESL	14 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
	TWA	0.8 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
	TWA	20 millions of particles	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended



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		per cubic foot of air	amended
Silane, dichlorodimethyl-, reaction products with silica - Respirable particles.	TWA	3 mg/m ³	US. ACGIH Threshold Limit Values, as amended
Silane, dichlorodimethyl-, reaction products with silica - Inhalable particles.	TWA	10 mg/m ³	US. ACGIH Threshold Limit Values, as amended
Silane, dichlorodimethyl-, reaction products with silica	REL	6 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
	IDLH	3,000 mg/m ³	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Silane, dichlorodimethyl-, reaction products with silica - Respirable fraction.	TWA	5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Silane, dichlorodimethyl-, reaction products with silica - Total dust.	TWA	15 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
	TWA	15 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended
Silane, dichlorodimethyl-, reaction products with silica - Respirable fraction.	TWA	5 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended
	TWA PEL	5 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
Silane, dichlorodimethyl-, reaction products with silica - Total dust.	TWA PEL	10 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
	TWA	15 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Silane, dichlorodimethyl-, reaction products with silica - Respirable fraction.	TWA	5 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Silane, dichlorodimethyl-, reaction products with silica - Total dust.	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended



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Quartz (SiO ₂) - Respirable dust.	TWA	0.1 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
	TWA	0.1 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended
Quartz (SiO ₂)	AN ESL	0.27 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
	ST ESL	14 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
Quartz (SiO ₂) - Respirable dust.	TWA PEL	0.1 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
Quartz (SiO ₂) - Total dust.	TWA PEL	0.3 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
Quartz (SiO ₂) - Respirable dust.	REL	0.05 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Quartz (SiO ₂) - Respirable.	TWA	0.1 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
	TWA	2.4 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Quartz (SiO ₂) - Respirable dust.	OSHA_ACT	0.025 mg/m ³	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended
	TWA	0.05 mg/m ³	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended
Quartz (SiO ₂) - Respirable dust.	PEL	0.05 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
Quartz (SiO ₂)	IDLH	50 mg/m ³	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Quartz (SiO ₂) - Respirable fraction.	TWA	0.025 mg/m ³	US. ACGIH Threshold Limit Values, as amended
Titanium oxide (TiO ₂) - Respirable fraction.	TWA	1 mg/m ³	US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values, as amended
Titanium oxide (TiO ₂) - Total dust.	TWA	10 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
	TWA	10 mg/m ³	US. Tennessee. OELs. Occupational Exposure



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			Limits, Table Z1A, as amended
Titanium oxide (TiO ₂)	ST ESL	50 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
	AN ESL	5 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
Titanium oxide (TiO ₂) - Total dust.	PEL	15 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
Titanium oxide (TiO ₂)	IDLH	5,000 mg/m ³	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Titanium oxide (TiO ₂) - Respirable finescale particles	TWA	2.5 mg/m ³	US. ACGIH Threshold Limit Values, as amended
Titanium oxide (TiO ₂) - Respirable nanoscale particles	TWA	0.2 mg/m ³	US. ACGIH Threshold Limit Values, as amended
Aluminum oxide (Al ₂ O ₃) - Total dust.	TWA	10 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Aluminum oxide (Al ₂ O ₃) - Respirable fraction.	TWA	5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Aluminum oxide (Al ₂ O ₃) - Total dust.	TWA	10 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended
Aluminum oxide (Al ₂ O ₃) - Respirable fraction.	TWA	5 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended
Aluminum oxide (Al ₂ O ₃)	AN ESL	5 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
	ST ESL	50 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
Aluminum oxide (Al ₂ O ₃) - Respirable fraction.	TWA PEL	5 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
Aluminum oxide (Al ₂ O ₃) - Total dust.	TWA PEL	10 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
Aluminum oxide (Al ₂ O ₃) - Respirable fraction.	TWA	1 mg/m ³	US. ACGIH Threshold Limit Values, as amended
Aluminum oxide (Al ₂ O ₃) -	PEL	15 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as



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Total dust.			amended
Aluminum oxide (Al ₂ O ₃) - Respirable fraction.	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
Aluminum oxide (Al ₂ O ₃) - Total dust.	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
	TWA	15 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Aluminum oxide (Al ₂ O ₃) - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
	TWA	5 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Aluminum oxide (Al ₂ O ₃) - Respirable particles.	TWA	3 mg/m ³	US. ACGIH Threshold Limit Values, as amended
Aluminum oxide (Al ₂ O ₃) - Inhalable particles.	TWA	10 mg/m ³	US. ACGIH Threshold Limit Values, as amended
Iron oxide (Fe ₂ O ₃) - Fume.	TWA	10 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
	TWA	10 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended
Iron oxide (Fe ₂ O ₃)	ST ESL	50 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
	AN ESL	5 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
Iron oxide (Fe ₂ O ₃) - Fume.	TWA PEL	5 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
Iron oxide (Fe ₂ O ₃) - Respirable fraction.	TWA	5 mg/m ³	US. ACGIH Threshold Limit Values, as amended
Iron oxide (Fe ₂ O ₃) - Dust and fume. - as Fe	REL	5 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Iron oxide (Fe ₂ O ₃) - Fume.	PEL	10 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended



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Iron oxide (Fe ₂ O ₃) - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Iron oxide (Fe ₂ O ₃) - Total dust.	TWA	15 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Iron oxide (Fe ₂ O ₃) - Respirable fraction.	TWA	5 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Iron oxide (Fe ₂ O ₃)	IDLH	2,500 mg/m ³	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
Benzene, methyl-	ST ESL	640 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
	AN ESL	1,200 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
	ST ESL	170 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
	AN ESL	330 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
	TWA	20 ppm	US. ACGIH Threshold Limit Values, as amended
	REL	100 ppm 375 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
	STEL	150 ppm 560 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
	IDLH	500 ppm	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
	TWA	100 ppm 375 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
	STEL	150 ppm 560 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
	Ceiling	300 ppm	US. OSHA Table Z-2 (29 CFR 1910.1000), as amended



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	MAX. CONC	500 ppm	US. OSHA Table Z-2 (29 CFR 1910.1000), as amended
	TWA	200 ppm	US. OSHA Table Z-2 (29 CFR 1910.1000), as amended
	TWA	100 ppm 375 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended
	STEL	150 ppm 580 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended
	Ceiling	500 ppm	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
	STEL	150 ppm 560 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
	TWA PEL	10 ppm 37 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
	LEL	1.1 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

Biological Limit Values

Chemical name	Parameters / Sampling Time	Exposure Limit Values	Source
Benzene, methyl-	o-Cresol, with hydrolysis Sampling time: End of shift.	0.3 mg/g (Creatinine in urine)	ACGIH BEI
	toluene Sampling time: End of shift.	0.03 mg/l (Urine)	ACGIH BEI



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	toluene Sampling time: Prior to last shift of work week.	0.02 mg/l (Blood)	ACGIH BEI
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Appropriate Engineering Controls

Observe good industrial hygiene practices. Low hazard for recommended handling by trained personnel.

Individual protection measures, such as personal protective equipment

Eye/face protection:

Avoid contact with eyes and prolonged skin contact. Protective gloves and goggles must be used if there is a risk of direct contact or splash.

Skin Protection

Hand Protection:

Material: Use suitable protective gloves if risk of skin contact.

Skin and Body Protection:

No data available.

Respiratory Protection:

No protection is ordinarily required under normal conditions of use and with adequate ventilation.

Hygiene measures:

Observe good industrial hygiene practices.



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9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	Solid
Form:	Gel
Color:	Tan
Odor:	Odorless
Odor Threshold:	No data available.
Melting Point:	No data available.
Boiling Point:	No data available.
Flammability:	No data available.

Upper/lower limit on flammability or explosive limits

Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Flash Point:	No data available.
Self Ignition Temperature:	No data available.
Decomposition Temperature:	No data available.
pH:	No data available.

Viscosity

Dynamic viscosity:	Not determined.
Kinematic viscosity:	No data available.
Flow Time:	No data available.

Solubility(ies)

Solubility in Water:	No data available.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Vapor pressure:	No data available.
Relative density:	No data available.
Density:	No data available.
Bulk density:	No data available.
Vapor density (air=1):	No data available.



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Other information
No data available

10. Stability and reactivity

Reactivity:	Material is stable under normal conditions.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Material is stable under normal conditions.
Conditions to avoid:	None under normal conditions.
Incompatible Materials:	None under normal conditions.
Hazardous Decomposition Products:	Material is stable under normal conditions.

11. Toxicological information

Information on toxicological effects

Inhalation:	Under normal conditions of intended use, this material is not expected to be an inhalation hazard. Prolonged breathing of high levels of crystalline silica can cause silicosis. Also, airborne crystalline silica is possibly carcinogenic to humans.
Skin Contact:	Due to the small packaging the risk of skin contact is minimal.
Eye contact:	Due to the small packaging the risk of eye contact is minimal.
Ingestion:	Due to the small packaging the risk of ingestion is minimal.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No specific symptoms noted.
Skin Contact:	Skin irritation is not anticipated when used normally.
Eye contact:	No specific symptoms noted.



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Ingestion: No specific symptoms noted.

Information on likely routes of exposure

Acute toxicity (list all possible routes of exposure)

Oral

Product: Not classified for acute toxicity based on available data.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Dermal

Product: Not classified for acute toxicity based on available data.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Inhalation

Product: Not classified for acute toxicity based on available data.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Repeated dose toxicity

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.



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Titanium oxide (TiO ₂)	NOAEL (Rat(Female, Male), Inhalation): 5 mg/m ³ Experimental result, Supporting study Inhalation NOAEL (Rat(female), Inhalation): 0.52 mg/m ³ Experimental result, Supporting study Inhalation NOAEL (Rat(Male), Inhalation): 5 mg/m ³ Experimental result, Supporting study Inhalation NOAEL (Mouse(female), Inhalation): 9.5 mg/m ³ Experimental result, Supporting study Inhalation NOAEL (Rat(Female, Male), Inhalation): 10 mg/m ³ Experimental result, Key study Inhalation
Aluminum oxide (Al ₂ O ₃)	LOAEL (Rat(Male), Inhalation): 28 mg/m ³ Read-across from supporting substance (structural analogue or surrogate), Supporting study Inhalation
Iron oxide (Fe ₂ O ₃)	NOAEL (Rat(Male), Inhalation): 10.1 mg/m ³ Read-across based on grouping of substances (category approach), Key study Inhalation NOAEL (Rat(Female, Male), Inhalation): 4.7 mg/m ³ Read-across based on grouping of substances (category approach), Key study Inhalation
Benzene, methyl-	LOAEL (Rat(Female, Male), Inhalation, 26 Weeks): 1,500 ppm(m) Not specified, Not specified Inhalation LOAEL (Rat(Female, Male), Inhalation): 600 ppm(m) Experimental result, Key study Inhalation NOAEL (Rat(Female, Male), Inhalation): 300 ppm(m) Experimental result, Key study Inhalation LOAEL (Rat(Female, Male), Inhalation): 4,710 mg/m ³ Experimental result, Key study Inhalation NOAEL (Rat(Female, Male), Inhalation, 26 Weeks): 100 ppm(m) Not specified, Not specified Inhalation

Skin Corrosion/Irritation

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.



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Titanium oxide (TiO ₂)	Minimal irritant in vivo , Rabbit, 24 hrs: EU Minimal irritant in vivo Rabbit, 48 - 72 hrs: EU Minimal irritant in vivo Rabbit, 24 - 72 hrs: EU Minimal irritant in vivo Rabbit, 1 hrs: EU Not irritant in vivo Rabbit, 1 hrs: EU Not irritant in vivo Rabbit, 24 hrs: EU Not irritant in vivo Rabbit, 24 - 72 hrs: EU Not irritant in vivo Rabbit, 48 - 72 hrs: EU
Aluminum oxide (Al ₂ O ₃)	Not irritant in vivo , Rabbit, 24 - 72 hrs: EU Not irritant in vivo Rabbit, 24 hrs: EU Not irritant in vivo Rabbit, 48 - 72 hrs: EU Not irritant in vivo Rabbit, 24 hrs: EU
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Respiratory or Skin Sensitization

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	Skin sensitization:, in vivo/in vitro (Guinea pig): Non sensitising Skin sensitization:, In vitro (Mouse): Non sensitising
Aluminum oxide (Al ₂ O ₃)	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	Skin sensitization:, in vivo (Guinea pig): Non sensitising

Carcinogenicity

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Quartz (SiO ₂)	Overall evaluation: 1. Carcinogenic to humans.
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ACGIH: US.ACGIH Threshold Limit Values:

Quartz (SiO ₂)	Hazard Designation: Group A2. Suspected human carcinogen.
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US. National Toxicology Program (NTP) Report on Carcinogens:



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Quartz (SiO₂) Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

Quartz (SiO₂) Cancer

Germ Cell Mutagenicity

In vitro

Product: No data available.

Components:
Silane, dichlorodimethyl-, reaction products with silica No data available.
Quartz (SiO₂) No data available.
Titanium oxide (TiO₂) No data available.
Aluminum oxide (Al₂O₃) No data available.
Iron oxide (Fe₂O₃) No data available.
Benzene, methyl- No data available.

In vivo

Product: No data available.

Components:
Silane, dichlorodimethyl-, reaction products with silica No data available.
Quartz (SiO₂) No data available.
Titanium oxide (TiO₂) No data available.
Aluminum oxide (Al₂O₃) No data available.
Iron oxide (Fe₂O₃) No data available.
Benzene, methyl- No data available.

Reproductive toxicity

Product: No data available.

Components:
Silane, dichlorodimethyl-, reaction products with silica No data available.
Quartz (SiO₂) No data available.
Titanium oxide (TiO₂) No data available.
Aluminum oxide (Al₂O₃) No data available.
Iron oxide (Fe₂O₃) No data available.
Benzene, methyl- No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Components:
Silane, dichlorodimethyl-, reaction products with silica No data available.
Quartz (SiO₂) No data available.



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Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Aspiration Hazard

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Information on health hazards

Other hazards

Product: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
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Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	EC 50 (96 h): > 9,051 mg/l Experimental result, Not specified NOAEL (Oncorhynchus mykiss, 96 h): >= 100 mg/l Experimental result, Weight of Evidence study LC 50 (Pimephales promelas, 96 h): > 1,000 mg/l Experimental result, Weight of Evidence study LC 50 (Cyprinodon variegatus, 96 h): > 240 - < 370 mg/l Experimental result, Not specified NOAEL (Pimephales promelas, 96 h): >= 1,000 mg/l Experimental result, Weight of Evidence study
Aluminum oxide (Al ₂ O ₃)	LC 50 (Pimephales promelas, 96 h): 35 mg/l Experimental result, Weight of Evidence study LC 50 (Oncorhynchus mykiss, 96 h): 14.6 mg/l Experimental result, Weight of Evidence study
Iron oxide (Fe ₂ O ₃)	LC 50 (Pimephales promelas, 96 h): 14.4 mg/l Experimental result, Supporting study LC 50 (Oncorhynchus mykiss, 96 h): 18.29 mg/l Experimental result, Supporting study LC 0 (Danio rerio, 96 h): >= 50,000 mg/l Experimental result, Key study LC 50 (Lepomis macrochirus, 96 h): 20 mg/l Experimental result, Supporting study
Benzene, methyl-	LC 50 (Pimephales promelas, 96 h): 33.9 mg/l LC 50 (Fathead minnow (Pimephales promelas), 96 h): 21 - 34 mg/l Mortality LC 50 (Oncorhynchus kisutch, 96 h): 5.5 mg/l Experimental result, Key study

Aquatic Invertebrates

Product: No data available.

Components:
Silane, dichlorodimethyl-, reaction products with silica No data available.
Quartz (SiO₂) No data available.
Titanium oxide (TiO₂) EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication
Aluminum oxide (Al₂O₃) No data available.
Iron oxide (Fe₂O₃) No data available.
Benzene, methyl- No data available.

Toxicity to Aquatic Plants

Product: No data available.

Components:
Silane, dichlorodimethyl-, reaction products with No data available.



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silica	
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Toxicity to microorganisms

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Aquatic Invertebrates

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Toxicity to Aquatic Plants

Product: No data available.

Components:

Silane, dichlorodimethyl-,	No data available.
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reaction products with
silica

Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Toxicity to microorganisms

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
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Quartz (SiO ₂)	No data available.
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Titanium oxide (TiO ₂)	No data available.
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Aluminum oxide (Al ₂ O ₃)	No data available.
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Iron oxide (Fe ₂ O ₃)	No data available.
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Benzene, methyl-	73 % Experimental result, Weight of Evidence study Detected in water. 86 % Experimental result, Weight of Evidence study Detected in water. 53 % Experimental result, Weight of Evidence study Detected in water. 100 % (4 d) Not specified, Not specified Detected in water. 70 % Experimental result, Weight of Evidence study Detected in water.
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BOD/COD Ratio

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica	No data available.
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Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica No data available.

Quartz (SiO₂) No data available.

Titanium oxide (TiO₂) Oncorhynchus mykiss, Bioconcentration Factor (BCF): 19 Experimental result, Key study Aquatic sediment
Oncorhynchus mykiss, Bioconcentration Factor (BCF): 67 Experimental result, Key study Aquatic sediment
Oncorhynchus mykiss, Bioconcentration Factor (BCF): 20 Experimental result, Key study Aquatic sediment
Cyprinus carpio, Bioconcentration Factor (BCF): 74 Experimental result, Supporting study Aquatic sediment
Oncorhynchus mykiss, Bioconcentration Factor (BCF): 34 - 352 Experimental result, Key study Aquatic sediment

Aluminum oxide (Al₂O₃) No data available.

Iron oxide (Fe₂O₃) No data available.

Benzene, methyl- No data available.

Partition Coefficient n-octanol / water (log K_{ow})

Product: No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica No data available.

Quartz (SiO₂) No data available.

Titanium oxide (TiO₂) No data available.

Aluminum oxide (Al₂O₃) No data available.

Iron oxide (Fe₂O₃) No data available.

Benzene, methyl- Log K_{ow}: 2.73

Mobility in soil:

Product No data available.

Components:

Silane, dichlorodimethyl-, reaction products with silica No data available.

Quartz (SiO₂) No data available.

Titanium oxide (TiO₂) No data available.



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Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Results of PBT and vPvB assessment:

Product	No data available.
Components:	
Silane, dichlorodimethyl-, reaction products with silica	No data available.
Quartz (SiO ₂)	No data available.
Titanium oxide (TiO ₂)	No data available.
Aluminum oxide (Al ₂ O ₃)	No data available.
Iron oxide (Fe ₂ O ₃)	No data available.
Benzene, methyl-	No data available.

Other adverse effects:

Other hazards	
Product:	No data available.

13. Disposal considerations

Disposal methods:	Dispose of waste and residues in accordance with local authority requirements.
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Contaminated Packaging:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
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14. Transport information

DOTUN number or ID number:	Not regulated.
UN Proper Shipping Name:	Not regulated.
Transport Hazard Class(es)	
Class:	Not regulated.
Label(s):	Not regulated.
Packing Group:	Not regulated.
Marine Pollutant:	Not regulated.
Limited quantity	Not regulated.
Excepted quantity	Not regulated.
Special precautions for user:	Not regulated.



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IMDG

UN number or ID number:	Not regulated.
UN Proper Shipping Name:	Not regulated.
Transport Hazard Class(es)	
Class:	Not regulated.
Subsidiary risk:	Not regulated.
EmS No.:	Not regulated.
Packing Group:	Not regulated.
Environmental Hazards	
Marine Pollutant:	Not regulated.
Special precautions for user:	Not regulated.

IATA

UN number or ID number:	Not regulated.
Proper Shipping Name:	Not regulated.
Transport Hazard Class(es):	
Class:	Not regulated.
Subsidiary risk:	Not regulated.
Packing Group:	Not regulated.
Environmental Hazards	
Marine pollutant:	Not regulated.
Special precautions for user:	Not regulated.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.



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US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

<u>Chemical Identity</u>	<u>OSHA hazard(s)</u>
	kidney effects
	lung effects
	Cancer
	immune system effects

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>
BENZENE, METHYL-

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Carcinogenicity

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

None present or none present in regulated quantities.

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US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Chemical Identity

TOLUENE

US State Regulations

US. California Proposition 65



WARNING: This product can expose you to chemicals including, Quartz (SiO₂), Titanium oxide (TiO₂) which is [are] known to the State of California to cause cancer.

This product can expose you to chemicals including, Benzene, methyl- which is [are] known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov.

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable



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Kyoto protocol
Not applicable

16. Other information, including date of preparation or last revision
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Issue Date: 02/27/2023

Version #: 14.3

Further Information: No data available.

Disclaimer: Disclaimer:

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